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Mr. Mathew P. Stein Inst No 17492.058 Belmont Correctional Inst P.D. SOX540 Started in 5 V, // e OH 43950

DEPARTMENT OF RADIOLOGY



Lucile Packard Children's Hospital

March 14, 2008

Mr. Mathew P. Stein Inst. No. A492.058 Belmont Correctional Inst. PO Box 540 St. Clairsville, OH 43950

Re: Aiden Stein (DOB 10-27-03)

Dear Mr. Stein:

I have reviewed the brain CT (3-15-04, 3-16-04, 3-17-04, 3-22-04) and skull x-rays (3-22-04) on the above child along with the clinical summary provided. The initial CT shows bilaterally large extracerebral low density collections (nonspecific subarachnoid or subdural fluid) along with some less extensive extracerebral high densities (hemorrhages or thromboses), especially high convexity frontal, left greater than right, and interhemispheric. Less obvious high densities are also present along the tentorium, dural venous sinuses, and falx. There are bilateral cerebral low densities with decreased gray-white matter differentiation (likely edema). There is prominence of the fontanelle and sutures and a question of cranial osteopenia. The parietal cranial irregularities likely represent suture variants rather than fractures. The skull radiographs show parietal cranial lucencies, likely representing accessory sutures or fissures as normal variants. The follow-up CT examinations show the presence of bilateral frontal extracerebral catheters post-surgery, increased high densities (hemorrhages), especially left extracerebral with rightward brain shift, and evolution / progression of the cerebral density abnormalities (edema to necrosis). An MRI was not done.

The CT findings of extracerebral low densities are nonspecific and may represent benign extracerebral collections of infancy or subdural collections of indeterminate content and age. Only an MRI can clarify this (in the absence of proper and timely neuropathologic analysis). The high densities represent subarachnoid and/or subdural hemorrhages. Some of the high densities may also represent venous thromboses. Again, only an MRI can clarify this. The evolving cerebral low densities likely represent edema evolving to necrosis. The findings are in no way characteristic of, or specific for, nonaccidental injury. In fact, as correlated with the clinical data, the imaging findings are consistent with long-standing extracerebral collections (e.g. benign extracerebral collections of infancy vs. chronic subdural collections dating back to birth) with superimposed hemorrhage (e.g. rebleed) complicated by hypoxia-ischemia. Other considerations for the imaging findings would include superimposed infection, coagulopathy, cerebral venous thrombosis, and accidental trauma, including surgical effects. My opinions in this case are expressed to a reasonable degree of medical certainty and based upon my more than 25 years of clinical, teaching, and research experience in injury to the developing brain. Please notify me at any time if I may be of further assistance.

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Sincerely,

Patrick D. Barnes, MD Chief Pediatric Neuron

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Professor of Radiology Stanford University Medical Center

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